1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

THE NATURAL HISTORY OF

KAMTSCHATKA.

PART II.

CHAP. I.

Of the SOIL.

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UPON the banks of the river *Kamtſchatka* is found plenty of roots and berries, which in ſome meaſure ſupply the want of corn. There is alſo wood ſufficient not only for building houſes, but even for ſhip-building; and Mr. *Steller* is of opinion, that near the head of this river, both ſummer and winter corn would grow as well as in any other places in the ſame latitude, the ſoil being deep and rich; and though ſnow falls in very great quantities, yet it thaws early enough, and the ſpring is not ſo rainy, nor have they ſuch damps, there as in many other places. Several tryals of ſummer-corn have been actually made both in the upper and lower *Oſtrog* * of *Kamtſchatka*; in which both barley and oats have ſucceeded. At the monaſtery of our Lord of *Jakutſki*, they have

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* *Oſtrog* is a little town fortified with palliſades, where the *Ruſſian* Coſſacks, and other inhabitants live.

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

134 241 ſeveral years paſt ſown ſeven or eight poods † of barley, which yielded a crop not only ſufficient for groats and meal for their own uſe, but even enough to ſupply their neighbours, though they are obliged to plough their land with men.

All garden ſtuff thrives not alike; the moſt ſucculent produce only leaves and ſtalks. Cabbage and lettice never grow to any head, and the peas continue in flower until late in the harveſt without yielding ſo much as pods; but garden roots which are full of juice, ſuch as turnips and radiſhes, grow very well. Theſe tryals, however, were only made upon the banks of the Great River and *Awatſcha*. Such things as require a hot ſoil, grow very well every where, but ſtill beſt upon the *Kamtſchatka*. Upon the Great River I never ſaw any turnips larger than three or four inches diameter; but upon the *Kamtſchatka*, I have ſeen them four or five times as big.

137 The graſs grows here ſo high, and is ſo full of ſap that one ſcarcely ſees any thing like it in all the empire of *Ruſſia*; near the river and lakes, and in the opening of the woods, it riſes to above the height of a man, and ſo faſt that it may ſometimes be mowed thrice in a ſummer; ſo that few places can be more proper for breeding of cattle; and although the blades are thick and high, and make but a coarſe ſort of hay, yet the cattle are large and fat, and give plenty of milk both ſummer and winter, which I attributed to the richneſs of the ſoil and the ſpring rains. The graſs continues full of juice, even to the beginning of winter, which being condenſed by the cold prevents the graſs from turning hard during that ſeaſon. As the graſs is ſo high and thick, a great deal of hay may be made upon a ſmall ſpot; and the cattle can find food in the fields all the winter. The places where 132 the graſs thus grows are never ſo much covered with ſnow as the bogs and ſwamps, and for this reaſon it is difficult to travel over them in the winter.

† A pood is a *Ruſſian* weight of 40 lb.

In

5: Jochelson A-5 (1910-11) 1928 Kamchadal

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The Russian Government repeatedly tried to introduce agriculture and gardening into Kamchatka. For this purpose peasants from Southern Siberia and European Russia were transferred several times to Kamchatka, but all experiments have failed and the imported husbandmen turned to fishing and hunting. Only in the valley of the Kamchatka River, near the village Kluchevskoye, small sowings of barley are still being made, but without any economic importance.

Experiments with gardening appeared to be more successful. Potatoes grow all over Southern Kamchatka where the digging of edible roots had almost ceased. Turnips grow there and the inhabitants of Kluchevskoye also grow cabbage, which heads well.

CLIMATE OF KAMCHATKA

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The following data on the climate of the Kamchatka Peninsula are based on observations made in 1908–1909 by the members of the Meteorological Division of the Riabooshinsky Expedition headed by Dr. V. A. Vlasov.[1]

As climate is one of the most effective nature-agents regulating human life, data concerning three chief regions of the country will be given: the western coast, the eastern coast and the central part, represented chiefly by the valley of the Kamchatka River. The western and the eastern shores represent maritime climates, while the climate of the central part may be characterised as a continental one.

The climate of the western coastline of Kamchatka is more severe than that of the eastern, due to the cold Okhotsk Sea. During the winter cold winds prevail, blowing from the Siberian continent, the region of the great Siberian anticyclone. A late spring and a cold summer characterise the climate of the western coast. On the eastern shore of Kamchatka, under the moderating influence of the Pacific Ocean, frosts in the winter are not so severe. Rain and snowfall are more abundant. However, the cold current arriving from the Bering Strait and the amount of ice which it brings delay the beginning of summer and reduce its temperature.

The climate of the central Kamchatka, confined by its western and eastern mountain ridges, i. e., the valley of the Kamchatka River, distinguishes itself by all the peculiarities of a continental climate, having a cold winter and a comparatively warm summer. In order to demonstrate what has been said of the three climatic regions, mean annual figures for three points are given: for Tighil on the western shore, Petropavlovsk on the eastern shore and Kluchevskoye in the valley of the Kamchatka River.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C
Tighil	−20.0	−19.8	−13.6	−2.2	2.4	6.2	11.2	12.1	7.0	−1.0	−7.4	−17.2	−3.5
Petropavlovsk	−10.9	−11.2	− 7.0	−1.6	3.1	7.9	11.8	13.5	9.8	4.2	−1.8	− 6.6	1.0
Kluchevskoye	−16.4	−15.2	−11.3	−1.5	4.8	9.5	13.15	13.1	8.8	−1.4	−7.8	−13.0	−2.0

[1] See V. A. Vlasov, The Kamchatka Expedition of P. P. Riabooshinsky organised by the Imperial Russian Geographical Society, Meteorological Division, vol. 1, part 1, *On the Climate of Kamchatka*; part 2, on *The Temperature of the Waters*. Moscow, 1910 (in Russian). Centigrade thermometers were used.

6:Antropova E-4 (no date) 1964 RY3 Kamchadal RY3

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View of the village of Sedanka, early 20th century.

The development of trade gave rise to the exploitation of the Itel'mens by merchants. These gave the Itel'mens goods on credit, often against their will; then, if the debt was not paid in time, they doubled or tripled the sum. Often, an Itel'men would have to pay as long as he lived for some small article, such as a knife. This type of trade did not disappear even after the formation of the Russo-American Company (1799). The company sold its wares at prices 10 times higher than their actual value. By the 1860's, the indebtedness of the Itel'mens to this company had risen to the grandiose sum of 150,000 rubles.

The Itel'men economy remained essentially subsistence. The fishing catch went solely for the satisfaction of the fishermen's needs, and none of it was sold. The only articles that had commodity value were furs. Villages were governed by elders, elected by the villagers and approved by the Russian administration. Very often the post of elder was hereditary. Survivals of clan organization were preserved among the Itel'mens until the 20th century. These included elements of collective production and distribution of food products—collective fishing by means of fishtraps, collective seal hunting, division of the carcass of a whale cast up on the shore, the custom of mutual aid, etc.

The first efforts at introducing agriculture were made after the founding of a monastery (the Uspenskaya Pustyn') on Kamchatka, in the first quarter of the 18th century. In the 1740's the first group of Russian peasants was resettled in Kamchatka. Further groups of settlers followed, but agriculture enjoyed small success. The administrative method of introducing agriculture among the Itel'mens could yield no appreciable results with the primitive agricultural techniques of that time. The products of agriculture therefore held a small place in Itel'men economy. Gardening was more successful. In the second half of the 19th century, all Itel'men villages had small gardens, producing potatoes, turnips and horse-radish. But even this gardening was negligible in scope and extremely primitive. The natives were unskilled in tending plants; they dug the soil with wooden hoes, did not know about watering, and so on.

Cattle were first brought to Kamchatka in 1733, and again, from time to time, in succeeding years. The livestock was kept grazing all year; there was little preparation of hay. Horses were also left to their own devices, and became so wild that they were difficult to catch. They were used chiefly in autumn as riding and pack animals. Wheel transport, such as the cart,

6:Antropova E-4 (no date) 1964 RY3 Kamchadal RY3

At present, the Itel'mens differ little in economy, culture and life from the neighboring Russian population of Kamchatka. They are united in fishing collectives which are well equipped with technical gear. A certain role in the Itel'men collectives is also played by sea hunting and the hunting of fur animals.

The land area devoted to gardening is growing yearly. Potatoes are grown everywhere in sufficient quantity to provide food until the next crop. The collectives have ploughs, harrows, haying-machines, and other agricultural implements. The ploughing is now done with horses. The stocks of cattle are gradually being improved; the preparation of hay is widely practiced, and warm barns have been built for the livestock. Some of the collectives, like the "Red Partisan," not only produce enough milk for their own needs, but also supply the workers and employees of the Tigil'skiy Rayon.

Today, Itel'men collective-farm members live in houses of the Russian type—spacious, bright, with large glass windows and plastered walls. The house furnishings are the same as those of the Russian collective-farm members.

In all the Itel'men villages there are medical institutions, clubs and schools. The instruction is in Russian, since all Itel'mens know Russian as well as their native language. Various institutions are staffed with native personnel. Dozens of Itel'mens, both men and women, are working as teachers, accountants, and nurses in hospitals, and are also serving in elective Party and Soviet posts.

7:Lesseps T-3 (1787-88)1790 Kamchadal

563 ſent be made of it. The ſwell of water had been ſo great as to overflow the ſluice, and to ſpread itſelf over a part of the plain where it was frozen. The ſoil appeared to be good, and the country round it to be very pleaſant. I queſtioned the Coſſacs upon the productions of their canton, where I conceived every ſpecies of corn might be cultivated with ſucceſs. They told me that their laſt harveſt had, both in quantity and quality, ſurpaſſed their hopes, and was not inferior to the fineſt harveſts in Ruſſia; two pouds of corn had produced ten.

563 Arrived at Milkoff, I was aſtoniſhed no
361 longer to ſee either Kamtſchadales or Coſ-
241 ſacs, but an intereſting colony of peaſants
R whoſe features and addreſs told me they
177 were not a mixed breed. This colony was
. 24 ſelected in 1743, partly in Ruſſia and partly in Siberia, among the primitive inhabitants, that is, among the huſbandmen. The view

of

7:Lesseps T-3 (1787-88)1790 Kamchadal

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of adminiſtration, in ſending them into this country was, that they might clear the land and make experiments in agriculture; hoping that their example and ſucceſs would inſtruct and encourage the indigenes, and induce them to employ their labours in this advantageous and neceſſary art. Unfortunately their extreme indolence, which I have already deſcribed, little correſponded with the wiſe intentions of government; and ſo far are they from pretending to any rivalſhip, that they have never derived the ſmalleſt advantage from the examples that are before their eyes. This extreme ſluggiſhneſs of the natives is the more painful to an obſerver, as he cannot but admire the induſtry of theſe active emigrants, whoſe labours have been attended with ſuch beneficial effects. Their habitations, ſituated upon the Kamtſchatka, ſeem to ſhew that they live at their eaſe. Their cattle thrive well from the great care they take of them.

I obſerved

7:Lesseps T-3 (1787-88)1790 Kamchadal

563 I obſerved alſo that theſe peaſants had in
241 general very much the air of being content-
R ed with their ſituation. Their labour is
177 profitable, and not exceſſive. Every man
.24 plows and ſows his field, and having only his capitation to pay, he reaps abundantly the fruit of his exertions, which a fertile ſoil repays him with uſury. I am convinced that greater advantages might be derived from this ſource, if the cultivators were more numerous. The harveſt conſiſts chiefly of rye, and a very ſmall quantity of barley. This colony has nothing to do with the chace. Government extended its cares ſo far as to prohibit it, that their labours might be wholly devoted to agriculture, and that nothing might divert their attention. The prohibition however, I could perceive, is not very ſcrupulouſly obſerved. Their chief is a *ſtaroſte*, appointed by adminiſtration, and ſelected from the old men of the village, as the name implies. His buſi-

neſs

7:Lesseps T-3 (1787-88)1790 Kamchadal

563 neſs is to inſpect the progreſs of agricul-
241 ture; to preſide over their ſeed time and
R their harveſt, to fix the preciſe period when
177 they are to take place; in ſhort, to ſtimu-
.24 late the negligence, or encourage the zeal of the labourers, and particularly to maintain the ſpirit of the eſtabliſhment and a good underſtanding among them.

000 Being deſirous of going to Machoure, to ſpend a day with the baron de Steinheil, I left M. Kaſloff at Milkoff, and ſet out twenty four hours before him, that I might occaſion no delay in his journey. To travel with the greater expedition I made uſe of a ſmall ſledge. The roads were no better or leſs obſtructed with ſnow than what we had before experienced, and I was therefore unable to make the ſpeed I intended, notwithſtanding my precaution. The firſt vil-
361 lage I came to was Kirgan. Before I reached it, I paſſed a number of houſes and

balagans

22: Guillemard T-2 (1882) 1886 Kamchadal

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country has any connection or not with the leprosy prevalent among them, it is difficult to say. Our informant described it as being a common disease, and he must have had considerable opportunities of judging, but it is remarkable that during our journey through the country we met with but one solitary case. Scurvy was, we were told, uncommon, owing no doubt to the abundance of the wild garlic and the *sarana*—a liliaceous plant whose bulb is stored for the winter, and supplies the place of the potato. This latter vegetable has, however, become much more extensively cultivated of late years.

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It was a matter of great regret to us that our acquaintance with Dr. Dybowski should of necessity have been so limited. He was on the eve of a long journey in search of fossils to the Kuril Lake, which lies in an almost unknown region at the southern extremity of the peninsula. It was by such pursuits alone that he was able to mitigate the loneliness of what was, in reality, an exile. During the winter he travelled over the country to such isolated spots of it as are inhabited, and saw his patients. These he was supposed to supply with such medicine as would suffice for their cure, or last them, should they be incurables, until the time of his visit in the following year! It is not every parish doctor whose district is spread over the extent of one hundred thousand square miles!

During the week that was necessary for the completion of our preparations we had abundant time for the exploration of Petropaulovsky and its surroundings. The numerous harbours and lovely scenery of Avatcha Bay would take a month to become thoroughly acquainted with, and it would be hard to imagine a more charming place for the naturalist and sportsman. Possibly, when the salmon rivers of Norway have reached a prohibitory price, and the game of India and South Africa has disappeared, some adventurous individual will recommend Kamschatka as a new field for sportsmen. At present, it must be confessed, it is not very easy to get there. Every year the port is visited by a

22: Guillemard T-2 (1882) 1886 Kamchadal

Every year the port is visited by a
439 Russian cruiser, and, if her officers should chance to be as excellent
505 companions as I have on every occasion found those with whom I have been brought into contact, a traveller might possibly get the offer of a passage, which, if he has command of the French language, a strong head, and an unlimited capacity for sweet champagne, should be enjoyable enough. A steamer, or steamers, belonging to the Alaska Commercial Company make two voyages annually to the port, to ship the furs awaiting them there and at Bering Island. They start from Yokohama, and it would no doubt be possible to obtain a passage. On leaving Kamschatka for the second time, however, these ships do not return south, but proceed direct to San Francisco.

136 The weather upon our arrival was pleasant and invigorating
226 to a degree; the days absolutely hot, with a brilliant sun and
241 wonderfully clear atmosphere, and the nights cold, but bright. But for the mosquitoes nothing could have been more enjoyable. These pests, which render life in a northern climate almost unbearable during the summer, were not very numerous in Petropaulovsky itself, but in some parts of Avatcha Bay we found them abundant, while in others not one was to be seen. As every one knows, the presence of these insects is almost always dependent on the existence of marsh, low-lying ground, or clumps of birches and other trees in the neighbourhood; but here, oddly enough, we found no such reasons to account for their erratic distribution. The little gardens of the settlement were aglow with bright flowers, though choked with weeds and coarse grass. But little cultivation was to be seen; a few patches of potatoes, cabbages, and such like garden produce, surround the cottages here and there, but there are no cereals. Rye ripens in some parts of the valley of the Kamschatka River, and would probably do so here, according to Dr. Dybowski, but its growth is not attempted. To the Kamschatkan the harvest of the river and the sea is an affair of such supreme importance, and demands so much of his time, that he has but little leisure for agriculture even if he had the inclination.

22: Guillemard T-2 (1882) 1886 Kamchadal

000 sewn together. They admitted enough light, however, to show us the strange mixture of ornament that hung upon the walls. In the corner was the usual tawdry *ikon*, and facing it, a long array of clippings from the "New York Police News," full of the choicest
262 horrors of battle, murder, and sudden death! Amid these lively
136 surroundings we consumed our sour milk and bilberries, and
224 bargained for some potatoes and turnips, which appeared to be
241 grown here in some abundance. Much, no doubt, might be done in the way of agriculture in many parts of the country were it not that the fish-harvest and hunting take up so much of the peasants' time. Of their success in the latter line we had evidence in a fine pair of horns of the Argali or Bighorn,[1] which lay outside the hut, and had only recently been shot. These animals, we were told, are not easily obtained at this season, and do not exist in any great numbers in the neighbourhood; but in the winter they descend to the lower spurs of the mountains, and are more easily brought to
000 bag. We much desired to obtain a head and skeleton of this sheep, but our limited time, and Afanasi's statement that we should be able to get them on the sea-coast about sixty miles to the eastward of Avatcha Bay, eventually decided us on relinquishing the idea of hunting them in this neighbourhood. We were pleased, however, to be able to prove their existence in the interior, which has by some previous writers been doubted.

We pursued our journey in a steady downpour of rain, our track leading through coarse grass and other annual vegetation so thick that from the back of a horse it was utterly impossible to see any trace whatever of the way. Our two hunters had donned their waterproofs,—long coats made from the intestine of the seal, carefully sewn together with sinew. These garments are tolerably strong in a thornless country, and though not ornamental, are as light as a feather, and most effectual in keeping out rain. We
133 passed to the south of some hot springs, about two versts distant from
515 the village, the water of which was said to be of such a temperature

[1] *Ovis nivicola*, Eschscholtz.

[i.e. Narchiki--analyst]

22: Guillemard T-2 (1882) 1886 Kamchadal

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peninsula. Now, however, Melcova must be regarded as the chief town of the interior, and its proximity—for it is only fifteen versts distant—must always effectually keep its rival in check. We were glad to get warm and partially dried at the house of the head-man before starting again for this latter place. Some few signs of cultivation were apparent: a few potatoes and turnips, and a small field of rye, the first cereal we had met with since our arrival in the country. It looked miserable enough under the pouring rain, and probably had little if any chance of ripening.

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Three more hours of rain and paddling brought us to Melcova. It was almost too wet for shooting, but we noticed two or three small parties of the red-necked Phalerope (*L. hyperboreus*) on our passage. Those that we obtained were in autumn plumage, and were most probably on their way to warmer latitudes. But few duck were to be seen. They had in all probability betaken themselves to the marshes at the onset of the rain, and the river was devoid of life. Before reaching the village an elaborate arrangement of fishing-stakes gave warning of the presence of what in Kamschatka may be termed civilisation. The stakes stretched right across the stream from bank to bank, but we found a small gap at the side sufficient to admit of the passage of a single canoe, and capable of being still further enlarged by pressing down the stakes. The arrangement for taking the fish consisted in the construction of small *currals* at intervals of about fifteen yards. These were long bottle-shaped baskets on the lobster-pot principle, furnished with doors opening at the lower end, by means of which the fish could be secured by gaff or otherwise. We learnt that there were very strict rules with regard to the complete barring of the river at this spot. The inhabitants are obliged to leave a free passage for the fish at the time of their first arrival in the spring, and also on certain days in the week or month at a later period. But for this arrangement the people of Sherowmy and Werchni Kamschatka would of course be without means of subsistence during the winter months.

22: Guillemard T-2 (1882) 1886 Kamchadal

563 The head-man of the village received us on landing—a person
622 of far higher class than any we had hitherto met, and apparently of unmixed Russian blood. He was the keeper of a small store, and owned a capital little log-built house, which we found uninhabited, and apparently intended for the reception of passing travellers. This he at once placed at our disposal. Tired and wet as we were, the prospect of pitching camp in a sea of mud was not a pleasant one, and breaking through our usual rule, we accepted his offer with pleasure. Before long we were enjoying the unaccustomed luxury of a chair, and were able to skin our birds in tolerable comfort for the first time since leaving Petropaulovsky.

167 Melcova owes its origin to an experiment. With the view of
563 encouraging the cultivation of the land and of making something
241 more of the country than a mere hunting district, where the in-
361 habitants caught enough salmon during the summer to enable them to go after the sables in the winter, a small colony of Russian
R peasants were settled here in 1743, who were to devote themselves
177 entirely to agriculture. The result has been to a certain extent
. 24 successful, for the community is a tolerably flourishing one, and with its population of over two hundred, is the most important settlement in Upper Kamschatka. It may, nevertheless, be doubted if the cultivation of the land has contributed to any great extent to its success, for, from the severity and uncertainty of the climate, the prospects of the farmer are as little encouraging here as they are anywhere, and there are probably the full average of sable-hunters in Melcova. But there are small fields and gardens, and a number of cows, which combine to give the place a more home-like and settled aspect than is usual in most Kamschatkan villages.

563 A great portion of our own interest in the place centred, I must confess, in the store. Here, in a space of about twelve feet by eight, we found flour, tea, sugar, candles, axes, and a few odds and ends for sale, but there were no sables or other furs as we had hoped. We had run short both of tea and sugar, and were

24: Lansdell-636 M-2 (1879) 1882 Kamchadal
116, 132, 137, 241, 286

" The valley watered by the Kamchatka is composed of fine mould, and has abundant natural productions- fir, birch, larch, poplar, willow, cedar, and juniper, and that of larger size than in the same latitude elsewhere in Asia. Raspberries, strawberries, whortleberries, currants, and cranberries abound; and flowers are seen in spring in almost tropical luxuriance. There is much grass in the lower lands, and Mr. Hill records an extraordinary phenomenon in a place he visited respecting the growth and preservation of potatoes.(1) There grows, likewise, a plant in the country called by

1. Admiral Ricord, a former governor of Kamchatka, imported potatoes for seed, and they were planted, but not taken up the following autumn. The next year, being found abundant and good, they were allowed to remain, where , dying and propagating continually, they yielded more than were locally required. Mr. Hill accounts for the phenomenon by the fact that neither damp nor frost could reach the potatoes; for though in winter the snow covers the surface of the frozen ground, yet so great in this vicinity is the internal volcanic heat that the earth is quite dry, and never frozen below a few inches from the surface.

the natives krapeva , from which they make a coarse but very durable cloth. It resembles our stinging -nettle, but is of larger growth and stronger fibre."

24: Lansdell-645-646 M-2 (1879) 1882 Kamchadal
116, 137, 177, 226, 241, 262

" In certain valleys, especially in those of Kamchatka, the grass exceeds the height of a man, and the Russian settlers make hay three times a year. The culture of cereals is of little profit; oats thrive best. Hemp has been grown, but not in sufficient quantities to replace the nettle as a textile thread. In fact, gardening has succeeded better than agriculture, and now the natives cultivate in hundreds of gardens cabbages, potatoes, beetroot, turnips, carrots, and other vegetables introduced by the Russians in the last century. All these, however, added to their other kinds of food, barely give sustenance enough to the Kamchatdales and their dogs, without which it would be almost impossible for them to leave their huts, at certain times of the year. During the four months of summer they must lay up dry fish to provide for eight months of winter, and the normal amount of winter food for a pack of half-a-dozen Kamchatdale dogs is 100, 000 herrings. Besides [646] this the owner's family must be nourished, and hence, if a bad season comes, and the fishing or hunting fails, death is certain; for to the greater part of the natives who have no deer, winter and want are synonymous terms."

27: Sauer--310 T-2 (1789-93) 1802 Kamchadal
116, 177, 241, 563 Russia
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"About the latter end of the year 1779, or the beginning of 1780, Major Behm returned to St. Petersburg. Major Reinikin succeeded him in the command, and wished to introduce among the natives the culture of the earth, but could not succeed; he brought potatoe seeds with him; first grew them in his own garden; and from thence they were abundantly distributed all over the peninsula, with every species of garden vegetables, which are cultivated with great success by the Russian inhabitants."

29:Cochrane T-2 (1821-22)1824 Kamchadal

134 on those banks which have been enriched by the
241 lava emitted by the volcanoes, barley, oats, and
R rye have been produced, but in no instance with
177 so much success as to pay the labour. The pro-
.24 ductions, it is true, have been a little more varied and a little riper, but rarely consumable. In spite of this fact, the gazettes of St. Petersburgh formally and officially announce this year that a quartern of rye produced nine quarterns, and that the size or weight of a common potatoe was three quarters of a pound. Three quarters of an ounce would be a sufficient tax upon credulity: I have no hesitation in saying that both these reports are fabulous in every sense of the word, for I have never seen a potatoe in the whole province either ripe, or larger than a hen's egg.

If large herds of cattle were distributed on the banks of the Kamtchatka, and other favoured places, with the benefit of manure, agricultural implements, and knowledge, no doubt the soil might be made to answer the purpose. I certainly cannot conceive the climate of Kamtchatka to be such, as of itself to preclude the pursuit of agriculture in some of its minor branches, as I consider the soil to be much superior to that of Connecticut, or Massachusetts, or either of our Canadas.

231 In the vicinity of Avatcha are to be seen, what are by some termed artificial enclosures, within which cattle were formerly maintained, but I conclude them to be natural enclosures formed by the